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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|----------------------|----------------------|------------------|
| 09/584,094 | 05/31/2000 | Woody A. Chea | PM 258174 | 2409 |
| 909 | 7590 | 06/02/2005 | EXAMINER | |
| PILLSBURY WINTHROP SHAW PITTMAN, LLP | | | WILLIAMS, LAWRENCE B | |
| P.O. BOX 10500 | | | ART UNIT | |
| MCLEAN, VA 22102 | | | PAPER NUMBER | |
| | | | 2634 | |

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,094

Examiner

Lawrence B Williams

Applicant(s)

CHEA, WOODY A.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Allowable Subject Matter

2. The indicated allowability of claims 15-17 is withdrawn in view of the newly discovered reference(s) Gersbach et al. (US Patent 5,293,405). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15, 14, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (10 Gbit/s, 285 km Repeaterless Optical Transmission Experiments with a Highly Sensitive Optical Preamplifier) in view of Gersbach et al. (US Patent 5,293,405).

(1) With regard to claim 14, Nakagawa et al. discloses in Fig. 1, a system comprising: a driver device (10Gbit/s transmitter) adapted to transmit a data signal, the data signal having transmission rates at least as high as 44.76 Mbps; a receiver device (10Gbit/s receiver) adapted

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to receive the data signal; and a communications link coupled to the driver device and the receiver device, the data signal being susceptible to distortions of phase and amplitude during transmission across the communications link, the communications link being at least 18,000 feet long.

However, Nakagawa et al. does not explicitly disclose a receiver system adapted to receive, regenerate and transmit the data signal, the receiver system including: a receiver device adapted to receive the potentially distorted data signal from the communications link, and a processor electrically coupled to the receiver device and adapted to receive the distorted data signal from the receiver device, regenerate the data signal to compensate for the effects of the communications link on the data signal, and output the regenerated data signal.

However, Gersbach et al. discloses in Fig. 1, a receiver system adapted to receive, regenerate and transmit the data signal, the receiver system including: a receiver device (10) adapted to receive the potentially distorted data signal from the communications link, and a processor (12, 14, 16) electrically coupled to the receiver device and adapted to receive the distorted data signal from the receiver device, regenerate the data signal to compensate for the effects of the communications link on the data signal, and output the regenerated data signal (col. 5, line 16 - col. 8, line 63).

Therefore it would have been obvious to one skilled in the art at the time of invention to incorporate the teachings of Gersbach et al. with the invention of Nakagawa et al. to provide an adaptive equalization and regeneration system for receiving digital signals which may be degraded with respect to amplitude and frequency (col. 2, lines 51-67).

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(2) With regard to claim 14, Nakagawa et al. also discloses in Fig. 1, wherein the communications link comprises at least one of unshielded twisted pair cable, coaxial cable and fiber optic cable.

(3) With regard to claim 18, Nakagawa et al. also discloses wherein the data signal comprises digitally encoded data signal. (Introduction).

5. Claims 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (10 Gbit/s, 285 km Repeaterless Optical Transmission Experiments with a Highly Sensitive Optical Preamplifier) in combination with Gersbach et al. (US Patent 5,293,405) as applied to claim 15 above and further in view of Phillips et al. (US Patent 6,178,179 B1).

(1) With regard to claim 16, claim 16 inherits all limitations of claim 15 above. As noted, Nakagawa et al. in combination with Gersbach et al. disclose all limitations of claim 15 above. They do not however teach wherein the receiver system further comprises a driver device electrically coupled to the processor and adapted to transmit the regenerated data signal to a subscriber.

However, Phillips et al. teaches in Fig. 1, wherein the receiver system further comprises a driver device (44) electrically coupled to the processor and adapted to transmit the regenerated data signal to a subscriber (col. 3, lines 47-61).

Therefore it would be obvious to one skilled in the art at the time of invention to incorporate the teachings of Phillips et al. with those of Nakagawa et al. in combination with Gersbach et al. as a well known device the art used to enhance transmission reliability over a transmission line or over extended distance.

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(2) With regard to claim 17, Phillips et al. teaches in Fig. 1, wherein the receiver system further comprises a driver device electrically coupled to the processor and adapted to transmit the regenerated data signal to a central node (col. 3, lines 47-61).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) De Andrea et al. discloses in US Patent 5,796,781 Data Receiver Having Bias Restoration.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Lawrence B. Williams

lbw

May 29, 2005



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